

Preoperative Assessments

This summary will provide all surgeons and other providers who require anesthesia services guidance to understand the process by which we hope to facilitate the best possible care for your patients. Following these directions should help ensure your patients are not cancelled or delayed the day of surgery. Please have your patients fill out the Patient History Questionnaire and scan into Application Extender. This form is available online at http://www.hopkinsmedicine.org/anesthesiology/Patient_Care/patient_info.cfm . For all cases scheduled for surgery (or ones you are considering for surgery), please follow this process:

1. **TRIAGE.** Refer to our Preoperative Guidelines to determine the appropriate triage for preoperative assessment. Essentially, please determine if your patients should be scheduled for a Preoperative Evaluation Center (PEC) visit. This will be either an Anesthesia Consult or routine visit. It may be possible that your patient may completely bypass this step if deemed appropriate, and simply show up the day of their procedure. All Anesthesia Consults should be scheduled by calling (410) 955-6353. All routine visits may be scheduled directly into the EPIC, Outpatient Scheduling system.
2. **TESTING AND INSTRUCTIONS.** Follow the Preoperative Guidelines to determine what laboratory studies and additional tests are required; as well as what medications to hold on the day of surgery, and NPO guidelines. When sending patients to the PEC center for their preoperative assessment, please fill out and sign an order sheet stating what lab studies you would like performed on your patient prior to surgery. Please only order lab studies that you want, and not ones that you think Anesthesia will want. The PEC practitioners will order appropriate labs for Anesthesia. This order sheet can be scanned into Application Xtender to allow quick access by practitioners in the PEC. This will help eliminate unnecessary lab studies and minimize confusion regarding required lab work.
3. **OUTSIDE STUDIES.** If outside facilities are utilized to generate lab studies, other diagnostic tests, or consultation reports, please obtain these results, and scan directly into Application Extender so they are available in WebX. Additionally, the patient should be instructed to bring copies of these results with them to PEC or the OR on the day of the procedure. For every patient requiring an ECG, please inform them to obtain a copy of a previous ECG for comparisons.
4. **PEC REVIEW OF OUTSIDE EVALUATION.** Patients that do not require a PEC visit may still have reports or diagnostic tests, as well as H&Ps that should be made available 72 hours prior to surgery. This will allow a review of their findings preoperatively, and determinations made regarding fitness for procedures. For these patients, their reports should be scanned into Application Xtender by your office staff, or may be faxed directly to our Clinical Documentation Center at (443) 287-9358 along with a cover sheet detailing the patient's name, full eight digit Hopkins history number if available, birth date, date of surgery, and surgeon's name. This information is then converted to our document management system (WebX) allowing electronic access to these documents.

Please instruct your patients that they will be contacted the day prior to their surgery (Friday for Monday surgery) by a nurse from the Preop area. Make certain your patients have valid phone numbers where they may be contacted during the day. If the patient has not received a phone call by 8:00 pm, please have them call one of the numbers listed below, depending on where they are scheduled for surgery:

Carnegie (GOR) - (410) 955 – 5386 (May be referred to as Osler prep).
JHOC prep – (410) 955 - 2280

Weinberg (WCC) - (410) 502-1100

For any issues or questions regarding this information, please contact either Dr. Neal Sakima, Medical Director of PEC (pager # 410 283-2038), or Dr. Jerry Stonemetz (pager # 410 283-5149).

Preoperative Testing

In an effort to reduce unnecessary testing, we are recommending utilizing the following approach (please refer to the color grid attached to this document):

For all patients scheduled for low or intermediate risk surgery, only the following labs are necessary:

- Hb/HCT on any menstruating female. For minor procedures on healthy patients, we may be able to check Hb am of surgery.
- Urine pregnancy test the morning of surgery on any menstruating female.
- ECG on any patient over the age of 50, unless we are provided with a previous normal tracing within one year. If there is any cardiac history, or the previous tracing is remarkable for abnormal findings, then a comparison tracing is required within one month of surgery.
- No CxR unless a history of pulmonary dysfunction with no previous CxR for one year.
- No PT/PTT unless a history of bleeding or easy bruising. If ordering these tests, only order the PT, not PTT (reserved for patients on Heparin).

This approach is only applicable on patients who have no significant comorbid conditions (ASA I or II). Any presence of significant medical conditions may require **additional testing**, and specific guidance is provided in Preoperative Guidelines on each condition. General guidelines listed below can be used to determine appropriate preoperative tests. **Please obtain these tests prior to a visit with the PEC.**

- Diabetes – Fasting BMP; ECG for all patients over the age of 20.
- HTN or Cardiac Dx – BMP; ECG; consider ECHO, Stress Test, and/or Cardiac evaluation if symptoms significant.
- COPD – PFTs if symptoms are significant.
- Anemia and/or Bleeding Hx – Heme 8; Consider PT. Auto-donors need to have Hb/Hct post donation.
- Liver dysfunction or Malnutrition – CMP, Heme 8.
- High Surgical Risk Procedures – Heme 8; CMP; Consider ECHO, Stress Test, and/or Cardiac evaluation if medical condition warrants.
- Poor Exercise Tolerance – Heme 8; CMP; ECG; PMD evaluation; Consider ECHO, Stress Test, and/or Cardiac evaluation.
- Morbid Obesity – BMP; CMP; ECG; Consider ECHO, Stress Test, and/or Cardiac evaluation.
- End Stage Renal (dialysis patients) – Post dialysis labs to include Heme 8 and BMP at a minimum; Na/K morning of surgery.
- Pacemakers – must be interrogated within 6 months, and have report on chart. Pacer dependent patients and AICD devices must be interrogated within 3 months. AICD patients must be seen by EP morning of surgery (see Appendix B). Provide this appendix to your patients for completion.
- For patients at risk for cardiac morbidity (previous MI, angina, significant cardiac risks having major surgery), please consider placing on beta blockers preoperatively (see Beta Blocker protocol).
- Type & Cross/T&S must be done at Hopkins within 30 days of surgery. Must answer three items to qualify as 30 day sample – transfused or pregnant w/in past 3 months, and date of surgery (see Appendix C).

Preoperative Recommendations for Medications (please refer to Appendix A – Preoperative Medications):

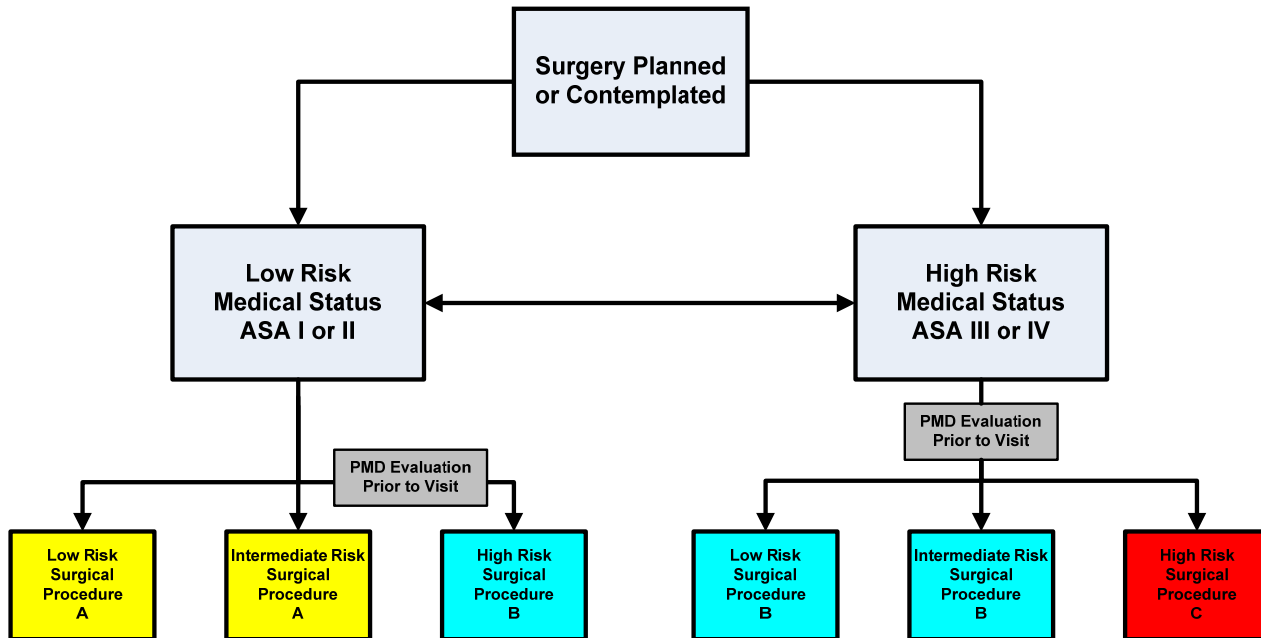
NPO Guidelines (refer to posted guidelines)

http://www.hopkinsmedicine.org/anesthesiology/Patient_Care/patient_info.cfm :

- Patients may have up to 8 ounces of clear liquid (water, apple juice – no pulp, black coffee or tea – no milk or milk products. Sugar is acceptable) two hours prior to the time they are to arrive at the hospital. No solid foods or non-clear liquids, gum or candy after midnight.

All patients are required to have a history and physical exam no more than 30 days prior to surgery. All information should be available for review by the anesthesia team no later than 72 hours prior to the scheduled procedure.

Please note that whenever possible patients should see their Internist, Cardiologist or other specialist prior to their preoperative evaluation and all notes or reports from the specialist should be available on the day of the preoperative assessment. For patients not coming to PEC that are not an 'A' category in following algorithm, please have PMD evaluate patient, and scan into Application Extender to allow review preoperatively. Charts for 'B' and 'C' class patients not completed 72 hours prior to surgery will not be reviewed, and risks being cancelled due to inadequate testing.



Definitions:

Low Risk Medical Conditions – Healthy with no medical problems (ASA I) or well controlled chronic conditions (ASA II)

High Risk Medical Conditions – Multiple medical comorbidities not well controlled (ASA III) or extremely compromised function secondary to comorbidities (ASA IV).

Low Risk Surgical Procedure – poses minimal physiological stress (ex. – minor outpatient surgery).

Intermediate Risk Surgical Procedure – Medium risk procedure with moderate physiological stress and minimal blood loss, fluid shifts, or postoperative changes.

High Risk Surgical Procedure – High risk procedure with significant fluid shifts, possible blood loss, as well as perioperative stress anticipated.

A

A – May have preanesthesia assessment done day of surgery

B

B – Recommend preanesthesia assessment with PEC visit at least 24 hours preoperatively. Should have an evaluation done prior to PEC visit by PMD.

C

C – Recommend Preanesthesia Consult scheduled in PEC at least 48 hours preoperatively. Should have an evaluation done prior to anesthesia consult by PMD.

Medical Conditions that may warrant an ASA III or IV status, and would benefit from a Preoperative Assessment at the PEC Center

General Conditions:

- Medical Condition inhibiting ability to engage in normal daily activity – unable to climb two flights of stairs without stopping.
- Medical Condition necessitating continual assistance or monitoring at home within the past six months.
- Admission to hospital within past two months for acute or exacerbation of a chronic condition.
- History of previous anesthesia complication or history of Malignant Hyperthermia.

Cardiovascular:

- History of angina, coronary artery disease or myocardial infarction.
- Symptomatic arrhythmias, particularly new onset A-Fib.
- Poorly controlled hypertension (systolic > 160 and/or diastolic > 110).
- History of congestive heart failure.
- History of significant valvular disease (aortic stenosis, mitral regurg, etc).

Respiratory:

- Asthma/COPD requiring chronic medication or with acute exacerbation and progression within past six months.
- History of major airway surgery or unusual airway anatomy (History of difficult intubation in previous anesthetic).
- Upper or lower airway tumor or obstruction.
- History of chronic respiratory distress requiring home ventilatory assistance or monitoring.

Endocrine:

- Insulin dependent mellitus
- Adrenal disorders
- Active thyroid disease
- Morbid obesity

Neuromuscular:

- History of seizure disorder or other significant CNS diseases (multiple sclerosis, muscular dystrophy, etc.).
- History of myopathy or other muscular disorders.

Hepatic/Renal/Heme:

- Any active hepatobiliary disease or compromise (hepatitis).
- End stage renal disease (dialysis).
- Severe anemias (Sickle Cell, Aplastic, etc.).

We strongly recommend that patients be seen in PEC as early as possible. If additional testing is required, we may not be able to arrange this testing in time for the scheduled surgery. Ideally, PEC patients should be seen at least one week prior to surgery, and Anesthesia Consults ten days prior to surgery. For 'B' & 'C' class patients seen by PMD, scanning History into Application Extender will allow chart review of these patients 72 hours preoperatively to determine if additional tests are required.

Appendix A – Preoperative Medications

As a general rule, for patients scheduled for surgery with anesthesia, we recommend all medications should be continued on the day of surgery to be taken with a sip of water prior to coming to the hospital. Exceptions to this recommendation are summarized below:

CLASS OF MEDICATIONS	MEDICATION	RECOMMENDATIONS
Oral Hypoglycemic Agents	Metformin/Glucophage Actos/ Glyburide/ Tolinase/ Avandia/ Amaryl/ all others	Hold at least 8 hours preop. Recommend holding am dose, day of surgery
Diuretics	Lasix/HCTZ	Hold am day of surgery, <i>unless</i> prescribed for CHF – these patients should take their am dose of diuretics.
ACE/ARB	Lisinopril/Lotrel/Captopril/Lotensin/ Monopril/ Prinzide/ Atacand/ Benicar/ Diovan/ Avalide	Hold am of surgery, <i>unless</i> prescribed for CHF – these patients should take their am dose of meds.
Insulin	NPH, Regular	Hold insulin am day of surgery. Bring insulin with patient to hospital.
All Herbal Supplements	See extensive list in Preoperative Guidelines section	Stop all Herbal Supplements at least 24 hours prior to surgery.

*** In particular, it is very important for patients to take their am dosage of the following medications:**

- Beta blockers and any antiarrhythmics such as Digoxin or Calcium Channel blockers.
- Asthmatic medications including inhalers, Theophylline, Singulair and/or steroids.
- GERD medication
- Statins such as Lipitor, Zocor, Crestor, etc.
- Aspirin – unless specifically told by their surgeons, patients should continue to take their ASA.
- ACE/ARB – consider having patients take these if HTN is difficult to control without them.
- Consider starting patients on Beta blockers preoperatively who could be considered at risk for cardiac ischemia. Please refer to the Beta blocker protocol in our Preoperative guidelines.

Please advise them to take these medications with a sip of water prior to coming to the hospital.

Appendix B – Pacemaker/ICD Evaluation and Management

All patients with pacemakers must have these pacemakers interrogated within six months of the day of surgery. All ICD devices and patients who are pacemaker dependent (100% paced) need to be evaluated within three months. Please provide this form to your patients for completion by their cardiologist. Your patients must have documentation of the pacemaker interrogation on the chart within 72 hours of surgery.

Please make certain your scheduler indicates Pacemaker in ORMIS on the Case Info II screen. Please fill out the patient name, date of surgery, history number and ORMIS case number before providing this form to your patients.

All ICD devices will be turned off by a pacemaker representative on the day of surgery, and consequently your service will need to contact this representative at least 24 hours prior to surgery to schedule a preoperative DOS visit. It is critical that you identify the manufacturer and type of device to allow contact with the appropriate rep. This information should be available from the patient's device ID card and from the outpatient device evaluation. These reps may be contacted by calling the following numbers:

- **Medtronic** – Ward Stephenson [800 633-8766]
- **St. Jude Medical** – Ronald Anderson [800 722-3423]
- **Guidant/Boston Scientific** – Allen Wish [800 227-3422]

When you contact these reps, please provide the following information – Pt name; Date of birth; Device make and model; Location of surgery (OR location); Date of surgery; Type of surgery. Time needed for ICD to be turned off; surgeon name; anticipated time surgery should end. Only contact these reps to turn off an ICD or reprogram a pacemaker if necessary. They are not to do routine interrogations. The decision to not turn off an ICD will be made by anesthesia.

Please have your patients have **this form** completed along with the **normal interrogation documentation** and a copy of the **device ID card**, and faxed back to our Clinical Documentation Center at (443) 287-9358 at least 72 hours prior to surgery.

Patient Name _____ Date of Surgery _____

History Number ___-___-___-___ ORMIS Case Number _____

Please indicate the following:

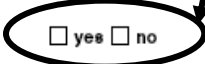
1. Underlying cardiac rhythm/rate (is patient pacer dependent – intrinsic rate < 50 when not paced): _____
2. Device Brand/Type (single/dual chamber): _____
3. What happens with Magnet (what is the rate of asynchronous pacing?):

4. Battery Condition: _____
5. Does patient have an ICD? ____ Yes; ____ No.

Appendix C – Blood Bank requisition form

ICD – 9 Coding Required for ALL OUTPATIENT Locations 1. Enter up to four ICD-9 codes in the numbered boxes below that you will associate with the test (s) ordered. 2. Write the diagnosis number (1, 2, 3, 4) in the box next to the lab(s) ordered for that diagnosis.		History#	
DIAGNOSIS 1	DIAGNOSIS 2	Name	
1. Place Patient information, in the Designated Space. 2. Record the Specimen Collection Date/Time and the Patient Location. 3. Enter the Ordering M.D. Name, M.D. Number. 4. Follow the requisition Instructions.		Birth Date:	
Comment:		Patient Location:	
<input type="checkbox"/> AM Phlebotomy Request <small>*Test not available thru AM Phlebotomy</small>	Collection Time: <input type="checkbox"/> AM <input type="checkbox"/> PM	Collection Date:	Ordering M.D. Name:
			M.D. #
Transfusion Medicine Laboratory (483)			
Instructions: * Send One (1) 6mL Pink Top Tube (EDTA) with * Handwritten Labels for Test Requests. If a Blood Product is Requested, send a Product Requisition Form (Path 12) for each Unit Requested.		COMPLETE INFORMATION: Is this a pre-surgical specimen? <input type="checkbox"/> yes <input type="checkbox"/> no	
Sample Collected by: Print Name: _____		Surgical Date: _____	
Select Test (s) 4010 <input type="checkbox"/> ABO, Rh Screen for Antibodies		The following questions must be answered to determine eligibility as a 30 day sample. Transfused <input type="checkbox"/> yes <input type="checkbox"/> no	
		OR Within the past three (3) months	
		Pregnant <input type="checkbox"/> yes <input type="checkbox"/> no	
		Specimen will be held for 3 days if questions are unanswered.	

Three items must be answered to qualify as a 30 day specimen.



All specimens must be drawn at JHH. For any patient scheduled for surgery, the blood specimen may be good for 30 days provided the questions defined above are answered:

1. The patient has not had a transfusion within 3 months of blood draw.
2. Patient has not been pregnant within 3 months of blood draw.
3. Patient is scheduled for surgery (provide date).

Name of physician (surgeon) must be provided to enable Blood Bank to follow-up in the event there are antibodies identified. In cases where antibodies are identified, the 30 day sample will be converted to a 3 day sample, and likely the patient will require a new sample prior to surgery.